



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,020	08/21/2003	David D. Lu	58934US002	7323
32692	7590	01/11/2006		
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			EXAMINER BARRECA, NICOLE M	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/645,020	Applicant(s) LU ET AL.	
	Examiner Nicole M. Barreca	Art Unit 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/11/05; 5/10/04; 11/28/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election with traverse of Group II in the reply filed on 10/28/05 is acknowledged. The traversal is on the ground(s) that the claims are so interrelated that a search of one group of claims will reveal art to the other and that classification in different classes and subclasses is not necessarily sufficient grounds to require restriction. The applicant also argues that restriction places an undue financial burden on the applicant. This is not found persuasive because the inventions of Groups I and II are distinct and have acquired a separate status in the art because of their divergent subject matter. The applicant even admits that additional consideration would be necessary if restriction was not required. The examiner has presented reasons why the inventions are distinct, as required when making a restriction. As recited in the previous restriction requirement, the inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process of using that product such as proximity or projection exposure. There are no financial considerations involved in a proper restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or

Art Unit: 1756

linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/28/05.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 16 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakizadeh (US 6,762,013).

5. The photosensitive fluorochemicals are useful as a photomask (col.34, 60-col.35, 64). An example of the fluorochemical includes ZONYL TLF 9515 and 9517, anionic fluorinated phosphate salts (col.39, 8-11).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 16, 17, 20 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-080594.

8. The resin composition is capable of providing a coating film excellent in antistatic ability, hardness, adhesion, UV transmissivity and water resistance, useful as a photomask. The coating composition is obtained by compounding (A) a polymerizable

Art Unit: 1756

acid phosphoric ester represented by formula I, where R₂ may be a halogenated methyl with (B) a silane compound represented by formula II and (C) an organic compound having greater than 2 polymerizable unsaturated double bonds in one molecule. A photomask having opaque and transparent portion is formed by coating a chromium thin film layer on a glass substrate. A protective coating of the resin composition is formed over the photomask. Abstract, [0010]-[0012], [0023], [0028]. The reference teaches using a halogenated phosphoric acid ester but is silent on the specific halogen. However it would have been obvious to one of ordinary skill in the art to use a fluorinated phosphoric acid ester because fluorine is one of the known halogens.

9. Claims 16-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boardman (US 6,824,882) in view of Mancini (US 6,300,042)

10. Fluorinated phosphonic acid compounds are disclosed in Boardman. See col.3, 34-col.4, 17 for formula. These compounds are useful as treatments for substrate surfaces. These compounds form a monolayer on the substrate surface which imparts a lower surface energy to the substrate surface. One or more useful properties such as water repellency, corrosion resistance, lubricity and adhesion release may be imparted to that surface as a result (col.1, 10-23). Fluorinated phosphonic acids of the invention may be applied to a variety of substrates. The layer of phosphonic acid is desirably in the range of 1-5 nm (col.4, 55-65). Boardman teaches treating a substrate by forming a layer of fluorinated phosphonic acid. This fluorinated phosphonic acid imparts a low surface energy to the surface of the substrate. While Boardman teaches that the fluorinated phosphonic acid may be applied to a variety of substrates the reference

Art Unit: 1756

does not explicitly disclose forming this layer on an article comprising a phototool.

Mancini teaches that a known problem in contact printing is the adhesion of particles such as dust and resist on the photomask surface when it comes into contact with the resist. A way to solve this problem and to make a photomask resistant to adhesion by such particles is by applying a layer of a low surface energy fluoropolymer to the surface of a photomask comprising a glass base with chrome opaque portions (col.1, 38-63; col.2, 36-57). Therefore it would have been obvious to one of ordinary skill in the art that the fluorinated phosphonic acid in the method of Boardman could be useful as a treatment layer on a photomask because Boardman teaches that the fluorinated phosphonic acid lowers the surface energy of the substrate surface and imparts adhesion release while Mancini teaches that materials possessing such properties are useful when applied to a photomask by solving the known problem of particle adhesion.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Art Unit: 1756

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 16, 17, 19-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 14-21 of U.S. Patent No. 6,824,882 in view of Mancini (US 6,300,042). The claims of 6,824,882 recite an article comprising a substrate including a monolayer of a fluorinated phosphonic acid. While the claims do not recite that the article includes a phototool, Mancini teaches that fluoropolymer layers are known to be reduce the particle adhesion problem when coated on photomasks (as discussed previously). It would have been obvious to one of ordinary skill in the art that the article on which the fluorinated phosphonic acid layer claimed in 6,824,882 was formed could be a photomask, as Mancini teaches that articles such as photomasks are often treated with a fluoropolymer layer in order to prevent adhesion of particles during contact printing.

13. Claims 16-18, 20-25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-14 of copending Application No. 10/886,123 in view of Mancini (US 6,300,042). The claims of 10/886,123 recite an article comprising a substrate including a compound of a fluorinated phosphonic acid, Formula 1. While the claims do not recite that the article includes a phototool, Mancini teaches that fluoropolymer layers are known to be reduce the particle adhesion problem when coated on photomasks. It would have been obvious to one of ordinary skill in the art that the article on which the fluorinated phosphonic acid layer claimed in 10/886,123 was formed could be a photomask, as

Art Unit: 1756

Mancini teaches that articles such as photomasks are often treated with a fluoropolymer layer in order to prevent adhesion of particles during contact printing.

This is a provisional obviousness-type double patenting rejection.

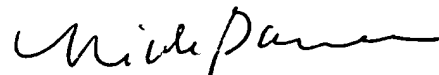
Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole M. Barreca whose telephone number is 571-272-1379. The examiner can normally be reached on Monday-Thursday (9AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nicole M Barreca
Primary Examiner
Art Unit 1756



1/9/05